

## SEQUENCE LISTING

&lt;110&gt; Eli Lilly and Company

&lt;120&gt; FSH AND FSH VARIANT FORMULATIONS, PRODUCTS AND METHODS

&lt;130&gt; X12383M Sequence Listing

&lt;140&gt;

&lt;141&gt;

&lt;150&gt; 60/093906

&lt;151&gt; 1998-07-23

&lt;150&gt; 60/094611

&lt;151&gt; 1998-07-30

&lt;150&gt; 60/094767

&lt;151&gt; 1998-07-31

&lt;150&gt; 60/098711

&lt;151&gt; 1998-09-01

&lt;150&gt; 60/100696

&lt;151&gt; 1998-09-17

&lt;160&gt; 20

&lt;170&gt; PatentIn Ver. 2.0

&lt;210&gt; 1

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; mammalian

&lt;400&gt; 1

Phe	Pro	Asp	Gly	Glu	Phe	Thr	Met	Gln	Gly	Cys	Pro	Glu	Cys	Lys	Leu
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Lys	Glu	Asn	Lys	Tyr	Phe	Ser	Lys	Pro	Asp	Ala	Pro	Ile	Tyr	Gln	Cys
		20						25						30	

Met	Gly	Cys	Cys	Phe	Ser	Arg	Ala	Tyr	Pro	Thr	Pro	Ala	Arg	Ser	Lys
		35						40					45		

Lys	Thr	Met	Leu	Val	Pro	Lys	Asn	Ile	Thr	Ser	Glu	Ala	Thr	Cys	Cys
		50					55						60		

Val Ala Lys Ala Phe Thr Lys Ala Thr Val Met Gly Asn Val Arg Val  
65 70 75 80

Glu Asn His Thr Glu Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
85 90 95

<210> 2

<211> 111

<212> PRT

<213> mammalian

<400> 2

Arg Ser Cys Glu Leu Thr Asn Ile Thr Ile Thr Val Glu Lys Glu Glu  
1 5 10 15

Cys Gly Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
20 25 30

Tyr Thr Arg Asp Leu Val Tyr Arg Asp Pro Ala Arg Pro Asn Ile Gln  
35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Lys Val Pro  
50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
65 70 75 80

Glu Cys His Cys Ser Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Arg Glu Ile Lys Glu  
100 105 110

<210> 3

<211> 96

<212> PRT

<213> mammalian

<400> 3

Phe Pro Asp Gly Glu Phe Thr Thr Gln Asp Cys Pro Glu Cys Lys Leu  
1 5 10 15

Arg Glu Asn Lys Tyr Phe Phe Lys Leu Gly Val Pro Ile Tyr Gln Cys

20 25 30  
 Lys Gly Cys Cys Phe Ser Arg Ala Tyr Pro Thr Pro Ala Arg Ser Arg  
 35 40 45  
 Lys Thr Met Leu Val Pro Lys Asn Ile Thr Ser Glu Ser Thr Cys Cys  
 50 55 60  
 Val Ala Lys Ala Phe Ile Arg Val Thr Val Met Gly Asn Ile Lys Leu  
 65 70 75 80  
 Glu Asn His Thr Gln Cys Tyr Cys Ser Thr Cys Tyr His His Lys Ile  
 85 90 95

<210> 4  
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 <213> mammalian

<400> 4  
 Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Val Glu Lys Glu Gly  
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 Cys Gly Phe Cys Ile Thr Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
 20 25 30  
 Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Asn Ile Gln  
 35 40 45  
 Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Lys Val Pro  
 50 55 60  
 Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
 65 70 75 80  
 Ala Cys His Cys Gly Lys Cys Asn Ser Asp Ser Thr Asp Cys Thr Val  
 85 90 95  
 Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Asp Met Lys Glu  
 100 105 110

<210> 5  
 <211> 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5

Ala Pro Asp Val Gln Asp Cys Pro Glu Cys Thr Leu Gln Glu Asn Pro  
 1 5 10 15

Phe Phe Ser Gln Pro Gly Ala Pro Ile Leu Gln Cys Met Gly Cys Cys  
 20 25 30

Phe Ser Arg Ala Tyr Pro Thr Pro Leu Arg Ser Lys Lys Thr Met Leu  
 35 40 45

Val Gln Lys Asn Val Thr Ser Glu Ser Thr Cys Cys Val Ala Lys Ser  
 50 55 60

Tyr Asn Arg Val Thr Val Met Gly Gly Phe Lys Val Glu Asn His Thr  
 65 70 75 80

Ala Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
 85 90

&lt;210&gt; 6

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 6

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Ile Glu Lys Glu Glu  
 1 5 10 15

Cys Arg Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
 20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln  
 35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Arg Val Pro  
 50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
 65 70 75 80

Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
 85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Glu Met Lys Glu

100

105

110

<210> 7  
 <211> 96  
 <212> PRT  
 <213> mammalian

&lt;400&gt; 7

Phe Pro Asp Gly Glu Phe Thr Met Gln Gly Cys Pro Glu Cys Lys Leu  
 1 5 10 15

Lys Glu Asn Lys Tyr Phe Ser Lys Leu Gly Ala Pro Ile Tyr Gln Cys  
 20 25 30

Met Gly Cys Cys Phe Ser Arg Ala Tyr Pro Thr Pro Ala Arg Ser Lys  
 35 40 45

Lys Thr Met Leu Val Pro Lys Asn Ile Thr Ser Glu Ala Thr Cys Cys  
 50 55 60

Val Ala Lys Ala Phe Thr Lys Ala Thr Val Met Gly Asn Ala Arg Val  
 65 70 75 80

Glu Asn His Thr Glu Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
 85 90 95

<210> 8  
 <211> 111  
 <212> PRT  
 <213> mammalian

&lt;400&gt; 8

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Thr Val Glu Lys Glu Glu  
 1 5 10 15

Cys Asn Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
 20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Asn Ile Gln  
 35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Lys Val Pro  
 50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
65 70 75 80

Glu Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Ser Glu Met Lys Glu  
100 105 110

<210> 9

<211> 96

<212> PRT

<213> mammalian

<400> 9

Phe Pro Asp Gly Glu Phe Thr Met Gln Gly Cys Pro Glu Cys Lys Leu  
1 5 10 15

Lys Glu Asn Lys Tyr Phe Ser Lys Pro Asp Ala Pro Ile Tyr Gln Cys  
20 25 30

Met Gly Cys Cys Phe Ser Arg Ala Tyr Pro Thr Pro Ala Arg Ser Lys  
35 40 45

Lys Thr Met Leu Val Pro Lys Asn Ile Thr Ser Glu Ala Thr Cys Cys  
50 55 60

Val Ala Lys Ala Phe Thr Lys Ala Thr Val Met Gly Asn Val Arg Val  
65 70 75 80

Glu Asn His Thr Glu Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
85 90 95

<210> 10

<211> 111

<212> PRT

<213> mammalian

<400> 10

Arg Ser Cys Glu Leu Thr Asn Ile Thr Ile Thr Val Glu Lys Glu Glu  
1 5 10 15

Cys Ser Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Asn Ile Gln  
35 40 45

Lys Ala Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Lys Val Pro  
50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
65 70 75 80

Glu Cys His Cys Gly Lys Cys Asp Arg Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Ser Asp Ile Arg Glu  
100 105 110

<210> 11

<211> 108

<212> PRT

<213> Homo sapiens

<400> 11

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Ile Glu Lys Glu Glu  
1 5 10 15

Cys Arg Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln  
35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Arg Val Pro  
50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
65 70 75 80

Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Glu  
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<210> 12

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 12

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Ile Glu Lys Glu Glu  
 1 5 10 15

Cys Arg Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
 20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln  
 35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Arg Val Pro  
 50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
 65 70 75 80

Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
 85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Glu Met  
 100 105

&lt;210&gt; 13

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 13

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Ile Glu Lys Glu Glu  
 1 5 10 15

Cys Arg Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
 20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln  
 35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Arg Val Pro  
 50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
 65 70 75 80



Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
 85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Glu Met Lys  
 100 105 110

<210> 14

<211> 276

<212> DNA

<213> Homo sapiens

<400> 14

gctcctgatg tgcaggattg cccagaatgc acgctacagg aaaacccatt cttctcccag 60  
 ccgggtgccc caatacttca gtgcatgggc tgcgtcttct ctagagcata tccactcca 120  
 ctaagggtcca agaagacgat gttggtccaa aagaacgtca cctcagagtc cacttgctgt 180  
 gtagctaaat catataacag ggtcacagta atgggggggt tcaaagtgga gaaccacacg 240  
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<210> 15

<211> 324

<212> DNA

<213> Homo sapiens

<400> 15

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 ataagcatca acaccacttg gtgtgctggc tactgctaca ccagggatct ggtgtataag 120  
 gacccagcca ggcccaaat ccagaaaaca tgtaccttca aggaactggg atatgaaaca 180  
 gtgagagtgc ccggctgtgc tcaccatgca gattccttgt atacataccc agtggccacc 240  
 cagtgtcact gtggcaagtg tgacagcgac agcactgatt gtactgtgcg aggcctgggg 300  
 cccagctact gctcctttgg tgaa 324

<210> 16

<211> 327

<212> DNA

<213> Homo sapiens

<400> 16

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 ataagcatca acaccacttg gtgtgctggc tactgctaca ccagggatct ggtgtataag 120  
 gacccagcca ggcccaaat ccagaaaaca tgtaccttca aggaactggg atatgaaaca 180  
 gtgagagtgc ccggctgtgc tcaccatgca gattccttgt atacataccc agtggccacc 240  
 cagtgtcact gtggcaagtg tgacagcgac agcactgatt gtactgtgcg aggcctgggg 300  
 cccagctact gctcctttgg tgaaatg 327

<210> 17

<211> 330

<212> DNA



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gacccggccc gtcccaaat ccagaaaaca tgtacctca aggaactggt atatgaaaca 180  
gtacgcgtgc ccggctgtgc tcaccatgca gattccttgt atacataccc agtggccacc 240  
cagtgtcact gtggcaagtg tgacagcgac agcactgatt gtactgtgcg aggcctgggg 300  
cccagctact gtccttttgg tgaa 324

## SEQUENCE LISTING

<110> James A. Hoffmann and Jirong Lu  
 <120> FSH FORMULATION  
 <130> X12383N Sequence Listing  
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 <141>  
 <150> 60/093906  
 <151> 1998-07-23  
 <150> 60/094611  
 <151> 1998-07-30  
 <150> 60/094767  
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 <150> 60/098711  
 <151> 1998-09-01  
 <150> 60/100696  
 <151> 1998-09-17  
 <160> 20  
 <170> PatentIn Ver. 2.0  
 <210> 1  
 <211> 96  
 <212> PRT  
 <213> mammalian  
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 Lys Glu Asn Lys Tyr Phe Ser Lys Pro Asp Ala Pro Ile Tyr Gln Cys  
 20 25 30  
 Met Gly Cys Cys Phe Ser Arg Ala Tyr Pro Thr Pro Ala Arg Ser Lys  
 35 40 45  
 Lys Thr Met Leu Val Pro Lys Asn Ile Thr Ser Glu Ala Thr Cys Cys  
 50 55 60  
 Val Ala Lys Ala Phe Thr Lys Ala Thr Val Met Gly Asn Val Arg Val  
 65 70 75 80  
 Glu Asn His Thr Glu Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
 85 90 95  
 <210> 2  
 <211> 111  
 <212> PRT  
 <213> mammalian  
 <400> 2  
 Arg Ser Cys Glu Leu Thr Asn Ile Thr Ile Thr Val Glu Lys Glu Glu  
 1 5 10 15

FOOTED" 95T92660



X12383N

-3-

Ala Cys His Cys Gly Lys Cys Asn Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Asp Met Lys Glu  
100 105 110

<210> 5

<211> 92

<212> PRT

<213> Homo sapiens

<400> 5

Ala Pro Asp Val Gln Asp Cys Pro Glu Cys Thr Leu Gln Glu Asn Pro  
1 5 10 15

Phe Phe Ser Gln Pro Gly Ala Pro Ile Leu Gln Cys Met Gly Cys Cys  
20 25 30

Phe Ser Arg Ala Tyr Pro Thr Pro Leu Arg Ser Lys Lys Thr Met Leu  
35 40 45

Val Gln Lys Asn Val Thr Ser Glu Ser Thr Cys Cys Val Ala Lys Ser  
50 55 60

Tyr Asn Arg Val Thr Val Met Gly Gly Phe Lys Val Glu Asn His Thr  
65 70 75 80

Ala Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
85 90

<210> 6

<211> 111

<212> PRT

<213> Homo sapiens

<400> 6

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Ile Glu Lys Glu Glu  
1 5 10 15

Cys Arg Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln  
35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Arg Val Pro  
50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
65 70 75 80

Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Glu Met Lys Glu  
100 105 110

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X12383N

-4-

<210> 7

<211> 96

<212> PRT

<213> mammalian

<400> 7

Phe Pro Asp Gly Glu Phe Thr Met Gln Gly Cys Pro Glu Cys Lys Leu  
1 5 10 15

Lys Glu Asn Lys Tyr Phe Ser Lys Leu Gly Ala Pro Ile Tyr Gln Cys  
20 25 30

Met Gly Cys Cys Phe Ser Arg Ala Tyr Pro Thr Pro Ala Arg Ser Lys  
35 40 45

Lys Thr Met Leu Val Pro Lys Asn Ile Thr Ser Glu Ala Thr Cys Cys  
50 55 60

Val Ala Lys Ala Phe Thr Lys Ala Thr Val Met Gly Asn Ala Arg Val  
65 70 75 80

Glu Asn His Thr Glu Cys His Cys Ser Thr Cys Tyr Tyr His Lys Ser  
85 90 95

<210> 8

<211> 111

<212> PRT

<213> mammalian

<400> 8

Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Thr Val Glu Lys Glu Glu  
1 5 10 15

Cys Asn Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys  
20 25 30

Tyr Thr Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Asn Ile Gln  
35 40 45

Lys Thr Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Lys Val Pro  
50 55 60

Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr  
65 70 75 80

Glu Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95

Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Ser Glu Met Lys Glu  
100 105 110

<210> 9

<211> 96

<212> PRT

<213> mammalian

<400> 9

Phe Pro Asp Gly Glu Phe Thr Met Gln Gly Cys Pro Glu Cys Lys Leu  
1 5 10 15

Lys Glu Asn Lys Tyr Phe Ser Lys Pro Asp Ala Pro Ile Tyr Gln Cys  
20 25 30

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Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys Thr Val  
85 90 95





[illegible]

22

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ataagcatca	acaccacttg	gtgtgctggc	tactgctaca	ccagggatct	ggtgtataag	120	
gacccagcca	ggcccaaaat	ccagaaaaca	tgtaccttca	aggaactggt	atatgaaaca	180	
gtgagagtgc	cgcgctgtgc	tcacattgca	gattccttgt	atacatacc	agtggccacc	240	
catgtgtcact	gtggcaagtg	tgacagcgca	agcactgatt	gtactgtgcg	aggcctgggg	300	
cccagctact	gctcctttgg	tgaaatgaaa	gaa			333	

<210> 19  
<211> 276  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Modified to  
facilitate cloning.

<400> 19  
gctcctgatg tgcaggattg cccagaatgc acgctacagg aaaacccatt cttctcccag 60  
ccgggtgccc caatacttca gtgcatgggc tgctgcttct caagagcata tcccactcca 120  
ctaaggtcca agaagacgat gttggtccaa aagaacgtca cctcagagtc cacttgctgt 180  
gtagctaaat catataacag ggtcacagta atgggggggt tcaaagtgga gaaccacacg 240  
gcgtgccact gcagtacttg ttattatcac aaatct 276

<210> 20  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Modified to  
facilitate cloning.

<400> 20  
aacagctgtg agctcaccaa catcaccatt gcaatagaga aagaagaatg tcgtttctgc 60  
atatcgatca acaccacttg gtgtgctggc tactgctaca ccagggatct ggtgtataag 120  
gacccggccc gtcccaaaat ccagaaaaca tgtaccttca aggaactggg atatgaaaca 180  
gtacgcgtgc ccggctgtgc tcaccatgca gattccttgt atacataccc agtggccacc 240  
cagtgtcact gtggcaagtg tgacagcgac agcactgatt gtactgtgcg aggcctgggg 300  
cccagctact gctcctttgg tgaa 324

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